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CR-132191

CENTER FOR RESEARCH, INC.

UNIVERSITY OF KANSAS

ERTS DETAILED IMAGE INTERPRETATION REPORT

CRINC

DIIR No. 2230-1

Date

Prepared 10 May 1973

Subject:

Detection of Water Bodies in Saline County, Kansas

Subject Geographic

Coordinates

N 38-18

W 98-10

NASA Test

Site No. NA

NASA Image Descriptors:

Hydrology

Report Summary:

Methods and materials:

Water bodies in Saline County, Kansas were mapped from an ERTS-1 image acquired October 26, 1972. The MSS-7 (infrared) band was used because water is a poor reflector in this band and therefore appears nearly black on the image. Water bodies were plotted on an overlay to an enlarged paper print (scale 1:500,000). Every black point detectable on the transparency or the print was plotted except those whose size or shape indicated that the point was some other object or an image flaw.

After the water bodies had been plotted and counted from the imagery, water bodies shown on 7.5 minute topographic maps (scale 1:24,000) of the county were also counted. The compilation of the maps were done in 1955.

Imagery References

CRINC Image No.	NASA Image ID Block	Subject Image X	Coordinates Y	Cloud Cover	Image Quality
MP00295	E-1095-16454-7	160	80	0	Good

Map References:

Refer to attached sheet

Digital Data Used Yes ☐ No ☒

Image  
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Grant No. NGL 17-004-024

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ID No. NA

N73-26313

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G3/13

CSCL 08H

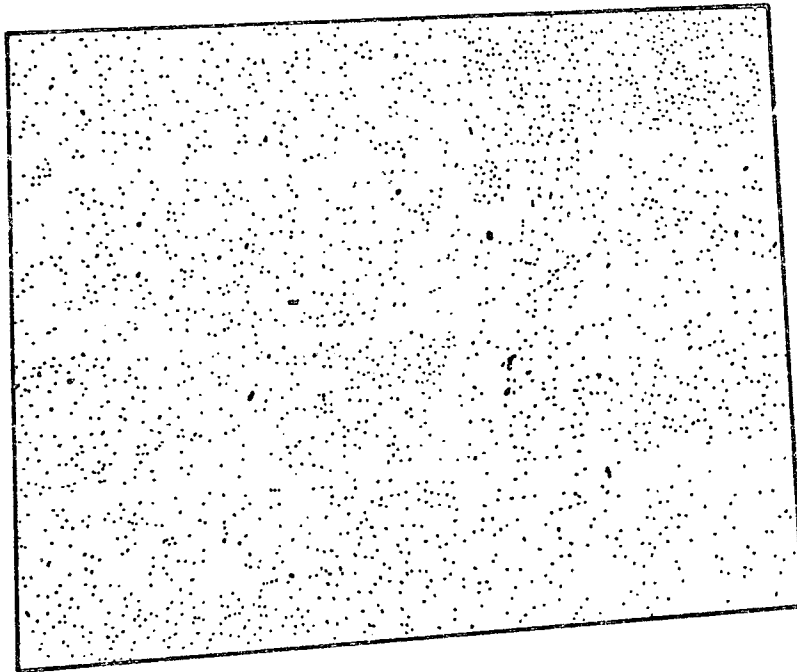
(E73-10684) DETECTION OF WATER BODIES  
IN SALINE COUNTY, KANSAS (Kansas Univ.  
Center for Research, Inc.) 4 p HC \$3.00

## Results

A total of 2,272 water bodies were mapped in Saline County from the 1972 ERTS imagery. The topographic maps show only 1,056 water bodies in the county in 1955. This represents a major increase, particularly in farm ponds in this period. (Figure 1)

Preliminary comparison of image and maps indicates that "water bodies" includes reservoirs, farm ponds, flooded quarries and sand pits, sewage disposal plants, and settling (catchment) basins. Water bodies larger than ten acres in area proved consistently detectable. Most water areas of four to ten acres are also detectable, although occasionally image context prevents detection. Water areas less than four acres in extent are sometimes detectable, but the number which can be detected varies greatly depending on image context and the individual interpreter.

Figure 1



Saline County, Kansas

Map References  
7.5 Minute Series (Topographic)

N 3852.5-W9715/7.5  
N 3845-W9715/7.5  
N 3837.5-W9715/7.5  
N 3830-W9715/7.5  
N 3830-W9730/7.5  
N 3830-W9722.5/7.5  
N 3830-W9737.5/7.5  
N 3830-W9745/7.5

N 3850-W9752.5/7.5  
N 3852.5-W9730/7.5  
N 3852.5-W9722.5/7.5  
N 3852.5-W9737.5/7.5  
N 3852.5-W9752.5/7.5  
N 3852.5-W9745/7.5  
N 3845-W9722.5/7.5  
N 3845-W9730/7.5

N 3845-W9737.5/7.5  
N 3845-W9745/7.5  
N 3845-W9752.5/7.5  
N 3837.5-W9730/7.5  
N 3837.5-W9737.5/7.5  
N 3837.5-W9745/7.5  
N 3837.5-W9752.5/7.5